CONTENTS OF VOLUME 27

Number 1

A. S. Elasfouri and M. M. Hawas	1	A simplified model for simulating solar thermal systems
M. Mishra and Ashok Chandra	11	Absorption spectra of metal particles–dielectric layer system in the wavelength range 0.5–2.0 μm
Y. P. Yadav and G. N. Tiwari	15	Transient analysis of double-pipe heat exchanger coupled to flate-plate solar collector
J. Prakash and E. Carnevale	21	Performance prediction of two models of solar water heaters using a thermal trap
N. M. Nahar and Jagdish P. Gupta	29	Performance and testing of improved natural circulation type solar water heater in arid areas
H. M. Ali	33	Study on shallow solar pond applications at Tehran
H. M. Ali	39	Solar energy availability at Tehran: performance of different types of solar collectors
A. C. Agbaka	45	Experimental investigation of the possible correlation of wind speed on insolation
Y. P. Yadav and G. N. Tiwari	49	Analytical model of solar swimming pool: transient approach
S. N. Sharan, S. S. Mathur and T. C. Kandpal	55	Analysis of a combined photovoltaic–thermal system consisting of a linear solar concentrator and a tubular absorber
A. C. Anuforom, A. V. Gholap and C. E. Okeke	61	Variation of efficiency and short-circuit current of an array of silicon solar cells with intensity of solar radiation under tropical atmospheric conditions
K. Mukhopadhyay and A. O. Odukwe	65	An appraisal of photovoltaic power system for rural development in context of available energy resources in Nigeria
M. A. I. El-Shaarawi and R. A. Ramadan	73	Effect of condenser temperature on the performance of intermittent solar refrigerators
M. S. Sodha, Sant Ram, N. K. Bansal and P. K. Bansal	83	Effect of PVC greenhouse in increasing the biogas production in temperate cold climatic conditions
Yojana Katti and P. K. Bansal	91	Stability analysis of solar ponds with non-constant temperature gradients

N. D. KAUSHIKA, M. S. SHARMA and SANJAY KAUL	99	Honeycomb roof cover system for passive solar space heating
N. S. DIXIT, N. VENKATRAMANI and V. K. ROHATGI	103	Measurement of temperature, electrical conductivity and ion density of seeded combustion plasmas
M. S. SHARMA and N. D. KAUSHIKA	111	Design and performance characteristics of honeycomb solar pond
P. C. PANDE and K. P. THANVI	117	Design and development of a solar cooker for maximum energy capture in stationary mode
Software Survey Section	I	

Number 2

Y. P. YADAV and G. N. TIWARI	121	Transient analytical study of box-type solar cooker
G. N. TIWARI, Y. P. YADAV and A. SRIVASTAVA	127	Optimization of heat loss reduction from the gas holder: analytical study
D. K. DUTT, S. N. RAI, G. N. TIWARI and Y. P. YADAV	133	Comparative studies of thermal performance of a roof as an inexpensive collector/storage system
D. K. DUTT, S. N. RAI, G. N. TIWARI and Y. P. YADAV	141	Transient analysis of a winter greenhouse
G. N. TIWARI and Y. P. YADAV	149	Transient analysis of conventional mud chullah
Y. P. YADAV, G. N. TIWARI and A. CHANDRA	153	An improved solar assisted biogas plant: a transient analysis
ICHIRO FUJIWARA, MASAHITO SATO, MASAYOSHI HIRAMATSU, YOSHIO FURUSAWA, HIROMASA SATAKE and MASAKI EBE	159	Equilibrium of NH_4SCN–NH_3 system for thermal energy storage
M. ALTAMUSH SIDDIQUI	163	Economic analysis of biogas for optimum generator temperature of four vapour absorption systems
ERIC HIRST, RICHARD GOELTZ and MARJIE HUBBARD	171	Determinants of electricity use for residential water heating: the Hood River conservation project
DAVE COOPER, MORT FELS and MURRAY PATTERSON	179	Evaluation of a wood waste burner and heat recovery system—I. Operation, thermal efficiency and particulate emissions
MORT FELS, DAVE COOPER and MURRAY PATTERSON	185	Evaluation of a wood waste burner and heat recovery system—II. Economics
C. D. RAKOPOULOS and E. VAZEOS	189	A model of the energy fluxes in a solar heated swimming pool and its experimental validation

M. N. A. Hawlader, K. C. Ng, T. T. Chandratilleke, D. Sharma and Kelvin Koay H. L. 197 Economic evaluation of a solar water heating system

J. Prakash and E. Carnevale 205 Use of thermal trap material for space heating of non-air conditioned buildings

R. S. Agarwal, A. K. Agarwal and S. M. Bin Gadhi 211 Performance analysis of R22 DMF turbo absorption refrigeration system

K. El-Housayni and E. Wilkins 219 Benefit cost analysis of gel solar ponds

R. K. Mazumder, T. C. Kandpal and S. C. Mullick 237 Design and optical performance analysis of seasonally adjusted discrete mirror solar concentrators

T. Kiatsiriroat, S. C. Bhattacharya and P. Wibulswas 247 Transient simulation of vertical solar still

M. A. R. Eisa, P. J. Diggory and F. A. Holland 253 Experimental studies to determine the effect of differences in absorber and condenser temperatures on the performance of a water–lithium bromide absorption cooler

M. Ishikawa, K. Kishimoto, S. Fukutomi and J. Umoto 261 Simulation of electrical nonuniformities in diagonal type MHD generators

Software Survey Section I CONINS: Insolation on Concentrating Collectors; ELATINS

Number 3

Y. P. Yadav and G. N. Tiwari 267 Transient analysis of a winter greenhouse integrated with solar still

M. F. M. Fahmy and M. Nassar 275 Modeling and analysis of the dynamic behavior of hot water systems with tanks in series

S. O. Onyegegbu 279 Stability of thermal convection in basin-type solar stills

R. K. Mazumder, N. C. Bhowmik, M. Hussain and M. S. Huq 285 Solar collector operating temperatures for maximum coefficient of performance of an absorption refrigeration system

Ram Chandra and M. S. Sodha 289 Drying characteristics of coarse agricultural grains

G. De Beni and R. Friesen 293 Experimental results of a solar hot water system with spontaneous, downward, non-freezing heat transport system

R. KERN and H.-G. WAGEMANN 301 Uncomplicated measurement procedure for current–voltage characteristics of photovoltaic generators at remote sites

D. K. DUTT, S. N. RAI and G. N. TIWARI 303 Transient analysis of a shallow solar pond water heater integrated with a baffle plate

M. M. SOROUR and V. I. SEDRA 309 Evaluation and management of a solar heated application in Alexandria

Y. DEMİREL and Ş. KUNÇ 317 Thermal performance study of a solar air heater with packed flow passage

G. N. TIWARI and Y. P. YADAV 327 Comparative designs and long term performance of various designs of solar distiller

Software Survey Section I

Number 4

V. K. GOEL, RAM CHANDRA and B. C. RAYCHAUDHURI 335 A study on the performance of a two-absorber reverse flat-plate collector

V. K. GOEL, RAM CHANDRA and B. C. RAYCHAUDHURI 343 Experimental investigations on single-absorber solar air heaters

S. N. SHARAN, S. S. MATHUR and T. C. KANDPAL 351 Optimum concentration ratio for an actively cooled solar concentrator–photovoltaic system with a fin-type absorber

S. N. SHARAN and T. C. KANDPAL 355 Optimum concentration ratio for a combined photovoltaic–thermal concentrator–receiver system

S. N. SHARAN, S. S. MATHUR and T. C. KANDPAL 361 Analytical performance evaluation of combined photovoltaic–thermal concentrator–receiver systems with linear absorbers

A. K. GOYAL, ASHVINI KUMAR and M. S. SODHA 367 Optimization of a hybrid solar forced-convection water heating system

M. TAKI AL-KAMIL and KHALIL K. MARZOUQ 379 Performance study of a solar water heater incorporating a bed of solid particulates

CHIH WU 385 Choice of working fluids for non-azeotropic mixed-refrigerants air conditioning systems

J. K. NAYAK 389 Transwall versus Trombe wall: relative performance studies

GOVIND, RASHMI, N. K. BANSAL and I. C. GOYAL 395 An experimental and theoretical study of a plastic film solar greenhouse

Software Survey Section I